

SIMSON, Ivan Iosifovich; MALYSHEV, V.V., dotsent, kand.tekhn.nauk,  
retsenzent; MOROZOV, N.A., dotsent, kand.tekhn.nauk, red.;  
CHIFAS, M.A., red.izd-va; SHCHETININA, L.V., tekhn.red.

[Safety engineering in woodworking] Tekhnika bezopasnosti  
pri mekhanicheskoi obrabotke drevesiny. Izd.2., perer. i dop.  
Moskva, Gos.sauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960.  
(MIRA 14:1)  
166 p.  
(Woodworking machinery—Safety appliances)

SIMSON, I., starshiy nauchnyy sotrudnik

Safety appliances on woodworking machinery. Okh. truda i sots.  
strakh. no.1:73-74 Ja 60. (MIRA 13:5)

1. Leningradskiy institut okhrany truda Vsesoyuznogo tsentral'nogo  
soveta profsoyuzov.  
(Woodworking machinery--Safety appliances)

SIMSON, I.

Increasing industrial safety in utilizing production areas in machinery  
manufacturing. Sots. trud 5 no.6:65-68 Je '60. (MIRA 13:11)  
(Leningrad Economic Region--Machinery industry--Safety measures)

SIMSON, I.I.

Improved standard safety guards. Der.prom. 9 no.2:13-14  
F '60. (MIRA 13:6)  
(Woodworking machinery--Safety appliances)

SIMSON, I.I.

Automatic feed systems for all-purpose woodworking machinery.  
Der.prom. 10 no.10:29-30 0 '61. (MIRA 14:9)  
(Woodworking machinery) (Automatic control)

SIMSON, I., starshiy nauchnyy sotrudnik

Automatic feed mechanism for woodworking machinery. Okhr. truda  
i sots.strakh. 5 no.1:27 Ja '62. (MIRA 15:2)

1. Leningradskiy institut okhrany truda.  
(Woodworking machinery)

SIMSON, I.I.

Automatic feed mechanisms for universal woodworking machines.  
Mashinostroitel' no.12:34-35 D '63. (MIRA 17:1)

SIMSON, I.I., inzh.

Automation of woodworking equipment. Mekh.i avtom.proizv. 17  
no.11:8-11 N '63. (MIPA 17:4)

SIMSON, I.I.

Mechanization of the feed of milling machines. Der. prom. 13 no.2:  
25-28 F '64. (MIRA 17:3)

SIMSON, I.I., inzh.

Reversing feed mechanisms for wood-cutting machines.  
Mekh. i avtom. proizv. 19 no.5:28-31 My '65.  
(MIRA 18:11)

SIMSON, T.P. [deceased]; GORDOVA, T.N.

S.S. Korsakov's personality in the light of some documents  
from the clinic's archives. Trudy 1-go MMI 34:36-48 '64.  
(MIRA 18:11)

SIMSON, T. P.

Medicine

DECEASED  
c. '61

see ILC

1962  
/7

SIMSON, Ye.A.

Rotary attachment for optical dividing heads. Izm.tekh.no.2:73  
Mr-Ap '56. (Dividing engine) (MIRA 9:?)

SIVSON, Ye.A.

Centralization of testing laboratories in enterprises. Izm.tekh.  
no.12:60-61 D '61. (MIRA 15:1)  
(Testing laboratories)

CZECHOSLOVAKIA

SASOVÁ, J.; BLÁZEK, Z.; Department of Pharmacology, Institute of Postgraduate Medical Training (Katedra Farmacie UDL), Prague; Research Institute of Natural Drugs (Výzkumný Ustav Přírodních Leciv), Prague.

"Variations in the Content of Furocoumarins During the Vegetation Period of Pastinaca Sativa L. Subsp. Eusativa Briq."

Prague, Ceskoslovenska Farmacie, Vol 16, No 1, Jan 67, pp 22-28

Abstract [Authors' English summary modified]: A two year study of the changes in furocoumarin content during the vegetation period is described. The highest content was found in green fruit (1.13%) and in the flowers (0.90%). The contents in the stem, leaves, secondary stems, and roots decrease in this order. The highest overall content in the whole plant occurs in the period of ripening of the fruit. The composition of the coumarins changes during the vegetation period. Bergaptene is the principal component with photosensitizing activity. 3 Figures, 5 Tables, 15 Western, 9 Czech, 5 Russian, 3 East German, 1 Hungarian reference. (Manuscript received 21 Dec 65).

1/1

VACAUNESCU, G.; SIMU, C.

Complicated staphylococcal septicemia with multiple tegumental gangrene  
of the extremities. Microbiologia (Bucur) 6 no. 1-2 Ja-F '61.

Anatomic and clinical aspects of staphylococcal septicemia with slow  
evolution. Ibid. 26

1. Clinica I medicala Cluj si Catedra de anatomie patologica Cluj.

SUCIU,I.; SIMU,G.; SIMPLACI~~ANU~~,L.; ORHA,I.

The antistreptolysin O titer (ASLO) in rheumatism and other  
diseases. Probl. ter., Bucur. 10 no.3:51-62 '59.

(ANTISTREPTOLYSIN,blood)

(RHEUMATISM,blood)

(STREPTOCOCCAL INFECTIONS,blood)

(ENDOCARDITIS,BACTERIAL, blood)

FREDA, V.; CHIRISUTA, I.; IOACIU-GRĂDINĂ, Cornelia; TIMI, G.  
GRĂDINĂ, I.K.; MELNICIU, Lucia

Some histochemical and biochemical aspects of the dynamics  
of experimental hepatoma genesis in the rat. Studii cerc  
biol s. zool 16 no. 2:145-154 '64.

1. Chair of Biology, Medicopharmaceutical Institute, Cluj.
2. Corresponding Member of the Romanian Academy (for Freda).

RUMANIA

CHIRICUTA, I., Dr.; TODORUTIU, Cornelia, Dr.; SIMU, G., Dr., and MULEA, Rodica, Biologist

"Modification of the Reticulo-Endothelial System in Burn Shock"

Bucharest, Revista Sanitara Militara, Vol 16, Special No., 1965, pp 183-187

Abstract: Studies in rats in burn shock injected with dye to determine the adequacy of the reticulo-endothelial system at various times following the burn. Early intensification of the system is followed by total exhaustion of function in 48 hours or so. Causes are discussed: central nervous system, endocrine system; overload by decomposed protein, plasma protein loss. This and other rat studies by authors indicated that the central nervous system and endocrine glands are the first to become exhausted, the reticulo-endothelial system follows.

CHIRICUTA, I.; POPESCU, V.; SIMU, Gh.; MOGOZAN, I.

Regeneration of the gastric mucosa and diminution of hydrochloric acid-pepsin secretion following resection of the gastric mucous membranes.  
Romanian M Rev. no.1:126-127 Ja-Mr '61.

1. The Laboratory of Experimental Surgery of the Oncological Institute in Cluj. Head of the Laboratory: Dr. I. Chiricuta.  
(STOMACH physiology) (MUCOUS MEMBRANE physiology)

KIRIKUTSE, I. [Chiricuta, I.]; POPESCU, V. [Popescu, V.]; SIMU, G.;  
ROGOCZAN, I.

Regeneration of the mucous membrane of the stomach and decreased  
secretion after partial excision of the mucosa. Biul. eksp.  
biol. i med. 52 no.11:115-118 N '61. (MIR 15:3)

1. Iz Instituta onkologii, Kluzh, Rumynskaya Narodnaya  
Respublika. Представлена деяствител'nym chlenom AMN SSSR  
A.V. Lebedinskim.  
(STOMACH—SECRETIONS) (MUCOUS MEMBRANE)

MUSTEA, I.; SIRI, G.; ORMAN, A.

The relation between acid-base unbalance and the malignancy of  
surgically removed tumours. Neoplasma (Bratisl.) 11 no.4:425-432  
'64.

I. Oncologic Institute, Cluj, Roumania.

CHIRICUTA, I.; PAPILIAN, C.; SIMU, G.; ROGOZAN, I.

Capillary permeability in burns. (Note) 1. Alterations of the  
ground substance in experimental shock induced by burns.  
Rumanian med. rev. 7 no.4:3-8 0-D'63

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STU, I.; DANE, V.

How to organize groups of students. p. 19. ARHILE ENTRIEI. (Asociatia  
Voluntara pentru Sprijinirea Apararii Patriei) Bucuresti. Vol. 2, no. 3,  
Mar. 1956

So. East European Accessions List Vol. 5, No. 9 September, 1956.

SDI, N.

"The Karkha National Park."

OCHRANA PRÍRODY, Praha, Czechoslovakia, Vol. 1., No. 3, 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September 1959.

Unclassified.

IONESCU, M. [Ionescu, M.]; SIMU, M.

Interrelation between the head of the pancreas and the other organs of  
the abdominal cavity. Arkh. anat., gist. i emb. /2 no.3:72-75 № 162.  
(MIRA 15:5)

1. Kafedra opisatel'noy i topograficheskoy anatomii Kluzhskogo mediko-  
farmatsevticheskogo instituta, Rumyniya. Adres avtorov: R.N.R.Kluzh,  
Miko, 3 Kluzhskiy mediko-farmatsevticheskiy institut.  
(PANCREAS) (VISCERA)

JASUENAS, M.; SILLIS, V.; SIAUKONITE, R.; KILAS, M., red.

[Regionally adopted varieties of agricultural cultures in  
the Lithuanian S.S.R.] Lietuvos TSR rajonuotos zemes ukiu  
kulturu veisles. Vilnius, Valstybine politines ir mokslyines  
literaturoje leidykla, 1961. 55 p. (MIRA 15:2)  
(Lithuania--Field crops--Varieties)

NESMEYANOV, A.N.; PEREVALOVA, E.G.; GOLOVNYA, R.V.; NIKITINA, T.V.; SIMUKOVA, N.A.

Disruption of the ferrocene nucleus by hydrogenation and treatment with  
halides. Izv.AN SSSR Otd.khim.nauk no.6:739-741 Je '56. (MIRA 9:9)

1.Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.  
(Iron dicyclopentadienyl)

SIRUKOVA, N.A.

Reactivity of mono- and bis(*p*-nitrophenyl)ferrrocene and diacetoferrocene  
A. V. Lomonosov Institute of Physical Chemistry  
P. V. Polovnya  
M. V. Lomonosov State Univ.

Nauk S.S.R., Otdel. Khim. Nauk 1957 63: 49 - Treatment of *p*-nitrophenylferrrocene with Hg(OAc)<sub>2</sub> in ac. gave 15% *o*-chloromercuri-*p*-nitrophenylferrrocene, red solid, only in Me<sub>2</sub>CO. It decomps. on heating. A mixture of male ferrocene in 20 ml AcOH to *p*O<sub>2</sub>N<sub>2</sub>C<sub>6</sub>H<sub>4</sub>Cl<sub>2</sub> in from 0.4 mole amine, stirring 2 hrs., and filtering gave 67% 4,4'-bis(*p*-nitrophenyl)ferrrocene, reduced with HCl to 81% bis(*p*-aminophenyl)ferrrocene, yellow, d. comp. (from EtOH); its dianisylidene deriv., m. 222-3° [picr. (CH<sub>3</sub>Cl)]. Similarly, ferrocene gave 17% bis(*p*-nitrophenyl)ferrrocene, m. 197-7.5° (from petr. ether). Adding I to diacetoferrocene in AcOH and stirring 0.5 hr. gave a pink which on heating with C<sub>6</sub>H<sub>6</sub> and evapn. the solvent yielded 49% 4-nitrophenyl-4-acetocyclopentadiene, red solid, decomp. 102-3° (from CHCl<sub>3</sub>); no starting material was recovered. Similar reaction with PhN<sub>2</sub>Cl gave 62% initial diacetoferrocene and 40% orange-red (phenylazo)acetocyclopentadiene, m. 73-2° (from aq. EtOH), showing monomer mol. wt. Diacetoferrocene with p-Me<sub>2</sub>N<sub>2</sub>Cl was sluggish and after 1 hr. at 40-50° gave 70% starting material and 17% (phenylazoo)acetocyclopentadiene, m. 105-7° (from cyclohexane). G. M. K. (pp. 3)

*between*  
LJUKOVA, V. A. *Zend Chem Sci--"Interaction of derivatives of ferrocene and  
aryldiazoniums."* Mos, 1960 (Acad Sci USSR. Inst of Elementary Organic Compounds)  
(KL, 1-Cl, 183)

NESMEYANOV, A.N., akad.; PEREVALOVA, E.G.; SIMUKOVA, N.A.; SHNEYKER,  
Yu.N.; REBETOVA, M.D.

Formation of the 1,2,3-oxadiazine ring in the reaction of  
1,1'-diacetylferrocene with aryl diazonium compounds. Dokl.AN  
SSSR 133 no.4:851-854 Ag '60. (MIRA 13:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.  
(Oxadiazine) (Ferrocene) (Diazonium compounds)

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2209, 1274, 1273

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B-01/B220

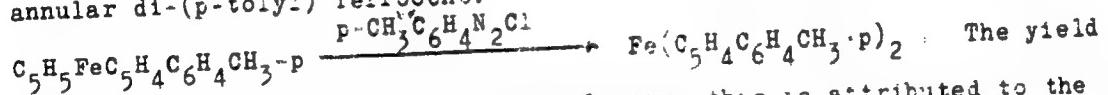
## AUTHORS:

Perevalova, E. G., Simukova, N. A., Nikitina, T. V.,  
Reshetov, P. D., and Nesmeyanov, A. N.

TITLE: Interaction between ferrocene derivatives and aryl diazonia

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,  
no. 1, 1961, 77-83

TEXT: The authors have shown in Refs. 1-3 that ferrocene reacts with aryl diazonia to form aryl ferrocenes. The present paper deals with the arylation of p-tolyl, methyl, ethyl ferrocene, as well as acyl and carboxy ferrocenes. It was possible to arylate p-tolyl ferrocene by means of p-tolyl diazonium and this resulted in the formation of hetero-annular di-(p-tolyl) ferrocene:



The yield amounted to only 9% of the theoretical one; this is attributed to the poor stability of the cation of this compound. Reaction between phenyl

Card 1/3

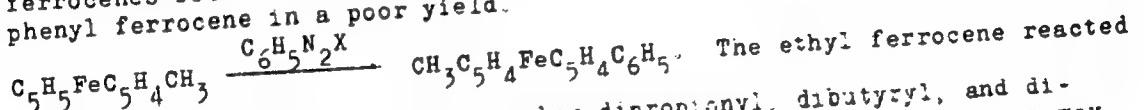
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## Interaction between ferrocene ...

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diazonium and methyl ferrocene resulted in a mixture of phenylated methyl-ferrocenes from which it was possible to isolate the heteroannular methyl-phenyl ferrocene in a poor yield.

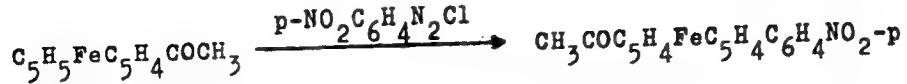


The ethyl ferrocene reacted similarly (20% yield). Heteroannular dipropionyl, dibutyryl, and dibenzoyl ferrocene reacted with p-nitro-phenyl diazonium in the same way as observed in the case of diacetyl ferrocene. The bond between the iron and the cyclopentadienyl ring was split, and derivatives of 1,2,3-oxa-diazine were formed. Resinification took place in the reaction between p-nitro-phenyl diazonium and the dimethyl ester of ferrocene dicarboxylic acid. It was proved possible to isolate chromatographically a reduced amount of p-nitro-phenyl-dicarbomethoxy ferrocene, but the ferrocene ring was destructed at the same time (appearance of iron ions). Monosubstituted ferrocenes, such as acetyl ferrocene and carbomethoxy ferrocene, react with p-nitro-phenyl diazonium like ferrocene, but with a lower yield of arylation products. Monoacetyl ferrocene formed both homoannular and heteroannular p-nitro-phenyl acetoferrocene:

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Interaction between ferrocene...

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B101/B220

+  $\text{C}_5\text{H}_5\text{FeC}_5\text{H}_3(\text{COCH}_3)\text{C}_6\text{H}_4\text{NO}_2-\text{p}$ . The methyl ester of ferrocene carboxylic

acid reacts to form heteroannular p-nitro-phenyl carbomethoxy ferrocene acid reacts to form heteroannular p-nitro-phenyl carbomethoxy ferrocene (yield 7%). The presence or absence of the non-substituted cyclopentadienyl ring was always established spectroscopically. The free mono- and dicarboxylic acids of ferrocene as well as their sodium salts together with p-nitro-phenyl diazonium gave mixtures from which the arylation products could not be isolated. L. V. Yershova and M. Kristynyuk assisted in the experiments. There are 14 Soviet-bloc references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 28, 1959

Card 3/3

KOCHETKOV, N.K.; BUDOVSKIY, E.I.; SIMUKOVA, N.A.

Chemical method for the specific splitting of ribonucleic acid.  
Biokhimiia 27 no.3:519-525 My-Je '62. (MIRA 15:8)

1. Laboratory of Carbohydrates and Nucleotides, Institute for  
Chemistry of Natural Products, Academy of Sciences of the U.S.S.R.,  
Moscow.

(NUCLEIC ACIDS)

KOCHETKOV, N.K.; BUDOVSKIY, E.I.; SIMUKOVA, N.A.

Primary structure of RNA. Interaction of RNA with o-methyl-hydroxylamine. Dokl. AN SSSR 153 no.3:597-600 N '63.  
(MIRA 17:1)

1. Laboratoriya uglevodov i nukleotidov Instituta khimii prirodnnykh soyedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Kochetkov).

ANNA L. ALEXANDROVNA VASILIEVA; ELENA V. ANDREEVA-ZVEREVA;  
G. MUL'YA, M.A., red.

[thin-layer chromatography] Tionokolomnicheskaya khromatogra-  
fija. Leningrad, Nauka, 1974. 174 p. (MIR 17:9)

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550720011-9

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550720011-9"

CHAIKINOV, NIKOLAEVICH, AV. VIZ., akademik, deputat po voprosam NIIKhM, M.I., akademik, chv. red.; V. V. TSVETOV, D. D., prof., red.; GAL'PERN, G. L., prof., red.; SLEZHKOVA, N. N., red.

[Chemistry of the alkaloids of plants of the U.S.S.R.]  
Khimiia alkaloidov rastenii SSSR. Moscow, Nauka, 1965.  
391 p. (VINITI 18:11)

SIMULESCU, Dumitru [Simulescu, D.] (Bukarest)

Prospects for the expansion of railroad transportation in  
Rumanian People's Republic. Zhel.dor.transp. 41 no.8:  
80-86 Ag '59. (MIRA 12:12)

1. Ministr transporta i svyazi Rurynskoy Narodnoy Respubliki.  
(Rumania--Railroads)

SIMULESCU, Dumitru [Simulescu, D.] (Bukharest)

Upswing in the railroad transportation of the Rumanian People's Republic. Zhel.dor.transp. 43 no.12:5-9 D '61. (MIRA 15:1)

1. Ministr transporta i svyazi Rumynskoy Narednay Respubliky.  
(Rumania--Railroads)

SIMPLY IT, SIGHTLY,

Development and modernization of telecommunications during  
the years of the people's democratic regime. St si Teh Buc  
it no. 73-5 JI 1986.

1. Minister of Transport and Telecommunications.

VELNICERIU, A.; SIMULESCU, Illeana; CIOCAN, C.

Physical and chemical properties of chemical means for  
plant protection. Pt. 3. Rev chimie Min petr 15 no. 5:  
257-260 My '64.

1. Institute of Chemical Research, Bucharest, Section  
of Phytopharmaceutical Products.

SIMULESCU-SARU, N.

RUMELIA/Cultivated Plants. Technic 1 Plnts. Oil and N.  
Sugar Beerin Plnts.

Abs Jour : Ref Zmar-Biel., No 15, 1956, 68300

Author : Simulescu-Saru, N., Draghici, D.

Inst : Lovrin and Cimpi Experiment Stations.

Title : The New Sugar Root Strains, Lovrin 532 etc  
Cimpi 34

Orig Pub : An. Inst. ceteectri agron., 1957, 24, No 5,  
21-30%

Abstract : In 1956, sugar beet selection began in Rumelia at the Lovrin and Cimpi Turzii Agricultural Experiment Stations. At the former, the Polish strain, Pushchenskiy KLR, served as the basic material, whereas at the second, Pushchenskiy KLR was used for this purpose. The Lovrin

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RUMJHA/Cultivated Plants. Technical Plants. Oil and X  
Sugar Beatin' Plants.

Abs Jour : Ref Zhur-Biol., No 15, 1955, 58300

strain is characterized by the speed of its  
saturation (particularly with regard to sugar  
accumulation), its relatively high drought re-  
sistance, and its responsiveness to fertilizers.  
However, it is not resistant to cercosporiasis.  
This strain combines high yields with high su-  
gar contents; it gives the best sugar harvests  
in the western part of Russia. The Gimpin Tur-  
zii strain is resistant to cercosporiasis, is  
fairly late in ripening, and requires relatively  
large amounts of moisture. It responds well to  
early sowing dates, and when harvested late, its  
yield is significantly increased. In the nor-  
thern part of the country, the Ardeola strain  
produces the highest sugar yields. Data are

Card : 2/3

RUMINL/Cultivated Plants. Technical Plants. Oil and H  
Sugar Beatin' Plants.

Abz Jour : Ref Zhur-Biol., No 15, 1958, 68300

presented on investigations of the strains  
under field conditions which were carried  
out in 1950-1955 in the various sugar beet  
zones of the Rumanian People's Republic. --  
N. I. Orlovskiy

Card : 3/3

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YEMEL'YANENKO, G.A.; SIMULIN, G.G.; BAYBAROVA, Ye.Ya.

Electrodeposition of copper from sulfuric acid solutions at  
high current densities. Ukr. khim. zhur. 29 no.4:404-408  
'63. (MIRA 16:6)

1. Dnepropetrovskiy gosudarstvennyy universitet.  
(Copper plating)

YEMEL'YANENKO, G.A.; BAYBAKOVA, Ye.Yu.; SIMULIN, G.G.

Cathodic deposition of zinc and lead at high current densities. Ukr.  
khim.zhur. 29 no.5:515-518 '63. (MIRA 16:9)

1. Dnepropetrovskiy gosudarstvennyy universitet.

YANKEVICH, G.A.; SOKOLOV, G.G.

Causes for the formation of some loose metal deposit's on the cathode at high current densities. Dokl. AN SSSR 158 no.5:1186-1189 O '64.

(MIRA 17:10)

1. Dnepropetrovskiy gosudarstvennyy universitet. Predstavлено akademikom A.N.Frumkinym.

Yu.D. Tikhonov, M.A. Vinogradov  
USSR Academy of Sciences, Institute of Mathematics

"Scilicet the determination of the transport numbers of ions  
in electrolyte solutions." Zhur. fiz. khim. 38 no 12 3001-3005  
MIRA 1964.

U. Dnepropetrovskiy gosudarstvennyy universitet.

AL'PAT'YAEVICH, G.A.; SIMEONOV, G.G.

Properties of copper electrodeposition from trisulfate solutions of  
monovalent copper at high current densities. Ukr. khim. zhur. 32  
no. 6; 584-587 '65. (VKA 18,7)

I. Dnepropetrovskiy gosudarstvenny universitet.

YU MEL'YANENKO, G.A., SIMULIN, G.I.

Electrodeposition kinetics of cobalt at high current densities.  
Zhur. fiz. khim. 39 no.5;1077-1081 May '65. (MURA 18:8)

1. Dnepropetrovskiy gosudarstvennyy universitet.

DMITRYEVICH, G. A., SINYAVIN, G. G.

Oscillographic study of nickel electrodeposition at high  
current densities. Elektrokhimiia 1 no.11:1384-1389 N '65.  
(M)RA (P:11)

I. Dnepropetrovskiy gosudarstvennyy universitet.

YEREL'YANENKO, G.A.; SAVIL'IN, D.G.

Determination of the transition time for a certain processes. Zhur.  
fiz.kh'm. 39 no.7:1732-1741. 41 '65.

(MIMA 18:8)

I. Dnepropetrovskiy gosudarstvennyy un. versitet.

YEMEL'YANENKO, G.A.; SIMULIN, G.G.

Electrodeposition of copper from thiosulfate solutions of  
cuprous oxide. Ukr.khim.zhur. 31 no.5:478-480 '65.  
(MIRA 18:12)

1. Dnepropetrovskiy gosudarstvennyy universitet. Submitted  
Sept. 25, 1963.

SIMULIN, N.A.

"Ways for the Complete Utilization of Gaseous Hydrocarbons in the Nitrogen Industry," by N. A. Simulin, Khimicheskaya Nauka i Promyshlennost', Vol 1, No 6, Nov/Dec 56 (published Feb 57), pp 648-653.

The advantages of using natural and petroleum gases rather than coke as raw material for the production of ammonia are reviewed. As far as catalytic processes for the conversion of gaseous hydrocarbons to hydrogen are concerned, reference is made to the preceding article by A. G. Leybush ("The Production of Hydrogen and of Synthesis Gas by the Catalytic Conversion of Hydrocarbon Gases," Khimicheskaya Nauka i Promyshlennost', Vol 1, No 6, Nov/Dec 1956, pp 638-648). The noncatalytic, high-temperature conversion of methane with oxygen (including the explosion conversion, which may be used for generation of power) is discussed on the basis of data that originated at the State Institute of the Nitrogen Industry. A flow sheet of the high-temperature conversion of methane with carbon monoxide at a pressure of 35 atmospheres is given.

It is pointed out that when gaseous hydrocarbons rich in methane are used as raw material, the simultaneous production of acetylene and of synthesis gas suitable for the production of ammonia or of methanol will present great advantages, and that the best method for the conversion of methane to acetylene at large plants producing ammonia and other nitrogen compounds is the method of oxidative pyrolysis (i. e., oxidation of methane to acetylene). The reasons for preferring oxidative pyrolysis to other methods for the production of acetylene are given and this method is described in some detail. The production scheme of a large plant which is now being constructed and which will produce acetylene and ammonia from natural gas of the Stavropol' field is outlined.

5400.1374

SIMULIN, N.A.

At this plant natural gas will be converted to acetylene and to synthesis gas for ammonia and for methanol. The acetylene will serve as crude material for the production of acetone, acetaldehyde, ethyl alcohol, acetic acid, and vinyl acetate. The ammonia will be converted to urea and to nitric acid. The nitric acid will be used in the production of phosphoric acid fertilizers from apatite. Ammonium nitrate and hydrocyanic acid will be also produced, the latter by the oxidation of methane and ammonia.

The production scheme to be used at plants for the conversion of natural gas-carbon monoxide mixtures is also described with the statement that work preparatory to designing a plant of this type is being done by the Institute of the Nitrogen Industry jointly with the Scientific Research Institute of Chemical Machine Building. At this plant carbon dioxide will be eliminated from the converted gas by washing with monoethanolamine. The synthesis gas for the ammonia production will be washed with liquid nitrogen to eliminate carbon monoxide and methane. As a result of the use of new technological processes and of their automatization, the cost of the acetylene produced will be 40% lower than that of acetylene produced from calcium carbide. The

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cost of the ammonia will be 60-70% lower than that of ammonia produced at plants using coke for the generation of gas and 20% lower than the cost of ammonia produced at plants which do not convert natural gas to by-product acetylene.

At the conclusion of the article the separation of petroleum gas into methane, ethane, and propane is discussed, methane being converted into acetylene and synthesis gas as discussed above, and propane, after conversion to propene, being used for the production of a number of substances, including isopropyl benzene. According to the production scheme which is shown, ethane, after being converted to ethylene, leads to a number of products, including ethyl benzene, polyethylene, and ethylene glycol. An alternative scheme for the conversion of petroleum gases by oxidation (without prior separation), combined with the production of ammonia and of nitric acid, is also shown. A bibliography consisting of three USSR references is appended to the article. (C)

54M.1374

## PHASE I BOOK BIBLIOGRAPHY

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Ambulyx book 5238. Institut maschinen- und mechanischen Industrie  
Dokumenta chemiebenen' SSSR (The Chemical Industry of the USSR)  
Moscow, Gostkhizdat, 1959. 477 p. Errata slip inserted. 4,100 copies  
printed.

Sponsoring Agency: USSR. Gosudarstvennyy nauchno-tekhnicheskyi komitet.

Editor: N. V. Remez. Ed.: P. V. Ryazanov; Editorial Board: A. P. Vinogradov,  
S. I. Vol'shovskiy, N. N. Zverevskiy, N. F. Kozacov, V. I. Krasikov, T. A.  
Lunacharskiy (Scientific Secretary), S. I. Novikov, S. D. Melnikh, A. M.  
Plavovskiy, A. M. Rybnikov (Chair Ed.), and A. V. Toporov.

PURPOSE: This book is intended for the personnel of the chemical industry, it  
will be of interest to the general reader interested in the development and  
structure of the Soviet chemical industry.

CONTENTS: This book contains 13 articles on various aspects of the Soviet  
chemical industry. Among the developments in the production of new materials  
for the manufacture of chemical products discussed are 1) the use of new  
materials synthesized from natural gas and petroleum to replace food products  
in the production of synthetic rubbers, alcohols, detergents, etc.; 2) the  
production of acetone from natural and petroleum gases for the synthesis  
of vinyl chloride, chloroprene, triisobutylene, 1,4-butadiene,  
and other organic substances based on methods developed by M. G. Kucherov,  
A. S. Venetov, and others; 3) the production of acetone hydrocarbons  
hydrogenated by reaction with steam (and the isomers); 4) the production of  
urethane two special reactors by pyrolysis (thermal  
oxidation) of urethane in an improved furnace designed by B. S. Orlovskiy;  
high-temperature pyrolysis of propane and butane to smaller  
fractions of synthetic rubber;  
other methods of producing acetone for the synthesis of solvents, depro-  
teinizing agents, and other organic substances; 5) the synthesis of halogen deriva-  
tives of aliphatic hydrocarbons for the production of plastic ad-  
hesive, pharmaceutical products, etc.; and 5) the production of rubber ad-  
hesive from nitrogen-containing aliphatic hydrocarbons. The industry of  
plastics production in the Soviet Union is reviewed, and basic technological  
and productive processes as well as the names of outstanding personalities in  
the field are given. The technical level and prospects of further develop-  
ment of different branches of the plastics industries are also discussed.

Along with methods of manufacturing plastic articles, a special ap-  
partus designed by Ye. M. Horlavlevy and colleagues permits  
preparation of viscose solution in one operation to discussed. It is being  
used to replace the complex conventional equipment with great savings in  
space. General trends in the technology of synthetic fiber production are  
also discussed. A historical review of synthetic rubber production and  
the achievements of outstanding Soviet scientists in this field are given as  
well as a summary of current locations and products of synthetic rubber plants. Rubber  
production and the manufacture of rubber goods are similarly reviewed.  
practical and operational personnel in the development of the  
synthetic fiber and carbonized personnel in several fertilizer laboratories and  
cotton, paper and leather, mineral oil, radioactive and stable  
radioactive, organic, plastic, and other industries are given. Chemical processes  
and automation and automatic devices used in the chemical industry are  
also discussed. Thirty-eight photographs included in the book show results  
and broader view of some Soviet chemical industry plants as well as  
their manufacturers, material resources and laboratory equipment. Numerous  
personalities and facilities are identified in the body of the text.

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nology 329

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Shchegoleva, G. I. Chemical Slags and  
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and 5/6

SIMULIN, N.A.

Ways of lowering construction costs of nitrogen industry enterprises. Prom.stroi. 37 no.3:6-9 Mr '59. (MIRA 12:4)

1. Direktor Gosudarstvennogo instituta azotnoy promyshlennosti.  
(Nitrogen industries) (Building-Estimates)

S/063/60/005/001/004/009

AUTHORS: Simulin, N. A., Afanas'yev, A. N.

TITLE: The Use of Coke Gas for Chemical Processing

PERIODICAL: Zhurnal vsesoyuznogo khimicheskogo obshchestva im. D. I. Mendeleyeva,  
1960, Vol. 5, No. 1, pp. 78-81

TEXT: The output of coke gas in the USSR will increase from 20.7 billion  $m^3$  in 1958 to 33 billion  $m^3$  in 1965. The content of hydrogen in the gas is most important for the chemical industry, because it is used for the synthesis of ammonia. The sulfur compounds contained in the gas can be processed to obtain elemental sulfur or sulfuric acid. The cost of ammonia synthesized from coke gas is compared to that produced from natural gas. There are two methods of producing ammonia from coke gas: the conversion of methane contained in the gas and the low-temperature separation of the gas. The latter method reduces the cost of ammonia by 10-12% and reduces the capital investment. The relative capital investments per 1 t of ammonia output are nearly the same for coke gas and natural gas as raw material, if the ammonia plant can cooperate with metallurgical works in decomposition of air into O and N, otherwise they are higher. In the case of the conversion of natural gas to ammonia without pressure the cost is

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The Use of Coke Gas for Chemical Processing

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the same as for ammonia produced from coke gas. In the case of cooperation with the metallurgical industry the cost decreases by 8-10%. In the present Seven-Year Plan the production of ammonia from coke gas will be increased by 2.5 times. Many installations will be erected in the USSR for the production of acetylene from natural gas by the method of thermal oxidation pyrolysis. In many regions, e. g., coke gas is used as raw material base. In this case hydrogen is used as heat source. Due to its high calorific value, it decomposes methane faster than the combustion of natural gas does. Less oxygen is needed, therefore, in the conversion of methane to acetylene and the yield of the latter is considerably higher. The acetylene cost is at least 10% lower than in the case of natural gas as raw material. The production of methanol from coke gas is more expensive than that from natural gas. The production of ethylene from coke gas by the method of low-temperature separation is 3-5 times cheaper than that from oil refinery gases or gas from the pyrolysis of kerosene. The difference is also great in the production of dichloroethane from coke gas ethylene or from gas of kerosene pyrolysis. There are 8 tables and 3 references: 1 Soviet and 2 English.

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S/064/60/000/008/001/008  
B020/B060

AUTHOR: Simulin, N. A.

TITLE: Technical Progress and the Economic Situation of the  
Nitrogen Industry

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 8, pp. 1-5

TEXT: The chief trend observable in the nitrogen industry for the forthcoming years is a change in the use of raw materials. Solid fuels are to be replaced by natural gas, accompanying gases of petroleum output, and residual gases in the acetylene production from natural gas. By the end of the Seven-year Plan, the exploitation of gaseous raw materials will rise from 35.3 to 86%, whereby production costs will be reduced by 50%, specific capital investments by 20 - 25%, and working productivity will be increased considerably. At the same time, it is expected that better conditions can be brought about in the way of overall automation, and that working conditions in the first phases of the process can be improved appreciably. The geographic position of the nitrogen industry will also undergo radical shifts, and the production of nitrogen fertilizers will

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Technical Progress and the Economic Situation  
of the Nitrogen Industry

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be brought closer to the places of consumption. In this way, transportation costs are expected to have dropped by 35% by the end of the Seven-year Plan. Urea is to be preferred to ammonium nitrate to reduce costs per unit weight of nitrogen in fertilizers, the latter having to be preferably used in the liquid form. The economy of the nitrogen industry is to be further promoted by combining it with other industrial branches as to the exploitation of waste gases rich in hydrogen yielded mainly by petroleum refineries, coke-processing and metalworking industries. Table 1 shows the dependence of technical-economic factors in the urea production on the capacity of a plant. The utilization of high-efficiency processes and units offers other possibilities of increasing the economy of processes. This is made possible by the use of high pressures and temperatures, the intensified application of catalytic processes, as well as an increase of the activity of catalysts and the use of facilities accelerating the substance and heat exchange. The technical and economic factors of different systems for the nitric acid production are indicated in Table 2. Practical examples are finally given along with results so far achieved. Mention is made of GIAP (Gosudarstvennyy institut azotnoy promyshlennosti = State Institute of the Nitrogen Industry), the Opytno-konstruktorskoye

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Technical Progress and the Economic Situation  
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B020/B060

byuro avtomatiki (Testing and Design Office for Automation), and the  
Stalinogorskiy khimicheskiy kombinat (Stalinogorsk Chemical Kombinat).  
There are 2 tables.

✓

Card 3/3

SIMULIN, M.A.

Technological progress and the economics of the nitrogen industry.  
Khim.prom. no.8:619-623 D '60. (MIRA 13:12)  
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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550720011-9

26. There are certain things  
which we must do. (100-105-111-113) (100-104-107)  
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Effect of skin transplantation on the toxemic state in thermal burns. Rozhl. chir. 43 no. 5:334-336 My'64

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SC: MONTHLY INDEX OF EAST EUROPEAN ACCOMPLISHMENTS (MAI) LC, VOL. 7, NO. 1, JAN. 1958

SIMUNEK, Miloslav

Manual double-spot welder type DF 35 Aro in sheet metal  
industry. Zvaranie 11 no.3:83-85 Mr '62.

1. Kovo-Finis, n.p., Ledec and Sazavou.

SIMUNEK, Miloslav

Powder cutting of the 18/8 type austenitic steel. Zvaranie 11 no 9:269-  
270 S '62.

1. Kovc-Finis, Ledec nad Sazavou.

S/137/63/000/001/011/019  
AC06/A101

AUTHOR: Simunek, Miloslav

TITLE: Cutting 18/8 type austenitic steels with a mixture of steel and cast-iron powder

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1963, 40 - 41, abstract 1E240 ("Zváranie", 1962, v. 11, no. 9, 269 - 270, Czech; summaries in Russian, German and English)

TEXT: At the KOVO-Finis (CSSR) Plant crushed cast-iron with 2 - 3% C is supplied to steel powder in the O<sub>2</sub>- cutting process. This improves the powder supply from the bin to the cutter. Cutting was performed with a R3-Z cutter and a PT-1 torch. Simultaneously with the use of the new powder mixture the cutting machine was perfectioned. A high-sensitive medicinal reduction valve was employed and the cutting torch was mounted on a special holder, permitting mechanization of the cutting process. The cast-iron powder is added to the steel powder in a 1 : 5 proportion. Air pressure of powder supply is 0.2 atm. The cutting quality is good; the gap width after cutting is 4 mm with 20 mm

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Cutting 18/8 type austenitic steels with...

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A006/A101

thick sheets. The cut edges are carburized to 0.3 - 0.5 mm depth. The slag is easily removed. Even in case of piece work, the new techniques yielded 12,000 crowns yearly savings as compared to mechanical cutting.

I. Vrbenskiy

[Abstracter's note: Complete translation]

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SIMUNEK, Miroslav

Low-voltage dynamos as current source for CO<sub>2</sub> shielded welding.  
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SIMUNEK, Miloslav

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